

CLAIMS

1. Process for the operation of a vehicle unit, which consists of a motor vehicle to which a trailer is coupled, wherein the motor vehicle is equipped with electronic systems for controlling and/or regulating operating conditions of the vehicle unit, characterized in that

the operating conditions achieved by the vehicle unit and/or desired by the driver are automatically controlled and/or regulated through the cooperation of the electronic braking system (EBS) and/or the electronic engine output control system (EMS) and/or the electronic drive-train control system (ASS) and/or the electronic steering system (ELS).

2. Process according to claim 1, characterized in that

when the vehicle unit achieves the operating condition "stop on an incline or a decline", the electronic braking system (EBS) holds the vehicle unit stationary.

3. Process according to claim 1 or 2, characterized in that

when the vehicle unit achieves the operating condition "stop on an incline", the electronic engine output control system (EMS) and/or the electronic drive-train control system (ASS) holds the vehicle unit stationary.

4. Process according to claim 2 or 3, characterized in that

when the operating condition "restart" is desired for the vehicle unit, the electronic braking system (EBS) and/or the electronic drive-train control system (ASS) cooperates with the electronic engine output control system in such away that a smooth (jolt-free) movement of the vehicle unit occurs in the direction of travel desired by the driver.

5. Process according to one of the claims 1 to 4, characterized in that

when the operating condition "continuous travel" is desired for the vehicle unit, the electronic braking system (EBS) and/or the electronic drive-train control

system (ASS) cooperates with the electronic engine output control system (EMS) in such away that a vehicle speed desired by the driver is maintained.

6. Process according to one of the claims 1 to 5, characterized in that
5 when the operating condition "slow travel" is desired for the vehicle unit, the response behaviour of the engine output control system (EMS) is altered in such away that, while maintaining the entire range of movement of the accelerator pedal, the amplification is reduced.

10 7. Process according to claim 6, characterized in that the reduction of the amplification occurs step-wise or continuously.

8. Process according to claim 6 or 7, characterized in that the reduction of the amplification is adjustable by the driver.

15 9. Process according to one of the claims 6 to 8, characterized in that when the actuation speed and/or the actuation force of the accelerator pedal exceeds a predetermined level, the reduction of the amplification is cancelled.

20 10. Process according to one of the claims 6 to 9, characterized in that when a predetermined period of time has elapsed since reduction of the amplification, the reduction of the amplification is cancelled.

25 11. Process according to one of the claims 1 to 10, characterized in that when the vehicle unit attains the operating condition "spinning of at least one drive wheel", the electronic braking system (EBS) and/or the electronic drive-train control system (ASS) and/or the electronic engine output control system (EMS) counteracts the spinning of the drive wheel(s) concerned.

30 12. Process according to one of the claims 1 to 11, characterized in that

when the operating condition "reduce speed" is desired for the vehicle unit, the retraction of the accelerator pedal of the electronic engine output control system (EMS) is evaluated in order to, in the event of exceeding or falling below a predetermined level, produce a moment (torque) counteracting the propulsion of the vehicle unit via the electronic braking system (EBS) and/or the electronic drive-train control system (ASS).

13. Process according to claim 12, characterized in that the level is predetermined as a particular gradient during retraction of the accelerator pedal and/or as a particular position of the accelerator pedal.

14. Process according to claim 12 or 13, characterized in that the level is adjustable step-wise and/or continuously by the driver.

15. Process according to one of the claims 1 to 14, characterized in that, when the operating condition "cornering" is desired for the vehicle unit, the impact of the steering is evaluated in order to, in the event of exceeding or falling below a predetermined level, produce a moment (torque) on at least one wheel of the motor vehicle at an inner side of the curve counteracting the propulsion of the vehicle unit via the electronic braking system (EBS) and/or the electronic drive-train control system (ASS).

16. Process according to one of the claims 1 to 15 characterized in that, when the operating condition "cornering" is desired for the vehicle unit, the impact of the steering is evaluated in order to, in the event of exceeding or falling below a predetermined level, produce a moment (torque) on at least one wheel of the motor vehicle at an outer side of the curve supporting the propulsion of the vehicle unit via the electronic braking system (EBS) and/or the electronic drive-train control system (ASS).

17. Process according to one of the claims 1 to 16, characterized in that,

when the operating condition "cornering" is desired for the vehicle unit, the impact of the steering is evaluated in order to, in the event of exceeding or falling below a predetermined level, generate a moment (torque) at the rear wheels of the motor vehicle supporting the cornering travel of the vehicle unit via the electronic steering system (ELS).

18. Process according to one of the claims 15 to 17, characterized in that the level is predetermined as a particular steering angle and/or as a particular vehicle speed.

19. Process according to one of the claims 12 to 18, characterized in that the level is adjustable step-wise and/or continuously by the driver.

20. Process according to one of the claims 12 to 19 characterized in that, when the operating condition "forward travel" is desired for the vehicle unit, a moment (torque) counteracting the propulsion of the vehicle unit is produced on at least one wheel of the trailer at an inner side of the curve via the electronic braking system (EBS).

21. Process according to one of the claims 12 to 20, characterized in that, when the operating condition "reverse travel" is desired for the vehicle unit, a moment (torque) counteracting the propulsion of the vehicle unit is generated on at least one wheel of the trailer at an outer side of the curve via the electronic braking system (EBS).

22. Process according to one the claims 12 to 21, characterized in that, when the operating condition "reverse travel" is desired for the vehicle unit, a moment (torque) counteracting the propulsion of the vehicle unit is generated on at least one wheel of the trailer at an inner side of the curve via the electronic braking system (EBS).

23. Process according to one of the claims 1 to 22, characterized in that the power assistance supplemented by the electronic steering system (ELS) for assisting the driver is adjustable.

5 24. Process according to one of the claims 1 to 23, characterized in that the transmission of the electronic steering system (ELS) is adjustable.

25. Electronic system for a motor vehicle, characterized in that the process according to one of the claims 1 to 24 is integrated as hardware
10 into the electronic system and/or implemented as software.

26. Electronic system according to claim 25, characterized in that the electronic system is the electronic braking system (EBS).

15 27. Electronic system according to claim 25, characterized in that the electronic system is the electronic steering system (ELS).